

Acid-Coated Sand For Gravel Pack and Filter Cake Clean-up

Abstract of Disclosure

A method of the preparation and utilization of polymerized alpha-hydroxycarboxylic-acid-coated proppants for gravel pack and removal of filter cake that was deposited by reservoir drilling fluid. In a preferred example, polyglycolic-acid-coated sand is used to replace conventional gravel pack sand typically used for gravel packing. Under downhole conditions, the acidic by-product generated from the hydration of polyglycolic-acid-coated sand can break down acid-soluble and/or acid-breakable components embedded in the filter cake. This reaction enhances the filter cake removal and the flow of hydrocarbon from the producing formation. The polyglycolic-acid-coated sand may be produced by polymerizing a glycolic acid with a natural or synthetic proppant like 20-40 mesh commercial sand, at temperatures of about 210 ° F or higher.